

U.S. Patent Application Serial No. 10/624,886
Response filed April 17, 2007
Reply to OA dated January 17, 2007

AMENDMENT TO THE SPECIFICATION:

Amend the specification as follows:

Please replace the paragraph beginning at page 12, line 4, with the following rewritten paragraph:

Then the case is described in which a sinusoidal wave signal with a frequency higher than $1/2 D$ is received as the smoothing signal Sh_{pp} . As shown in Fig. 4, the smoothing signal Sh_{pp} shown in the section (a) is converted by the binarizing circuit 202 and the data converter 211 to the discrete value output signal D_{pp} shown in the section (b). The discrete value output signal D_{pp} is delayed and sign-negated by the delay/sign-negator 212 with the delay time D prolonged and the sign-negated, and is outputted as the delayed/sign-negated output signal D_{dlpp} as shown in the section (c). It is to be noted that, as a half cycle of the discrete value output signal D_{pp} is shorter than the delay time D in the delay/sign-negator 212, the delayed/sign-negated output signal D_{dlpp} has a rectangular waveform with a phase different from that of the discrete value output signal D_{pp} . Therefore, when the delayed/sign-negated output signal D_{dlpp} and the delayed/sign-negated output signal \bar{D}_{dlpp} are multiplied by the multiplier 213, the multiplied value output signal D_{prd} generated as described above and as shown in the section (d) take positive or negative discrete values at the probability of about 50% respectively. Therefore, when the multiplied value output signal

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Dprd is integrated by the integrator 214, the multiplied value output Dint does not amplify almost at all as shown in the section (e). Thus, when a sinusoidal wave signal with a frequency higher than 1/2 D is received as the smoothing signal Shpp, the autocorrelation computing circuit 210 does not amplify the integrated value output signal almost at all.